

The DAWN Report

December 15, 2011

Illicit Drug-Related Emergency Department Visits in Metropolitan Areas of the United States: 2009

In Brief

- Rates of emergency department (ED) visits involving illicit drugs were higher in Boston (571 per 100,000 pop.), New York City (555 per 100,000 pop.), Chicago (507 per 100,000 pop.), and Detroit (462 per 100,000 pop.) than in the Nation as a whole (317 per 100,000 pop.)
- In comparison with the national rate (69 per 100,000 pop.), the rates of ED visits involving heroin were higher in Boston (251 per 100,000 pop.), Chicago (216 per 100,000 pop.), New York City (153 per 100,000 pop.), Detroit (150 per 100,000 pop.), and Seattle (118 per 100,000 pop.)
- Compared with the national rate (69 per 100,000 pop.), five metropolitan areas showed higher rates of visits involving illicit drugs in combination with alcohol: New York City (223 per 100,000 pop.), Boston (153 per 100,000 pop.), San Francisco (150 per 100,000 pop.), Chicago (120 per 100,000 pop.), and Detroit (112 per 100,000 pop.)

Patterns and types of drug use, misuse, and abuse vary widely across communities, metro areas, regions, and states.¹ These differing patterns across varied geographic areas must be understood if appropriate prevention and treatment interventions are to be undertaken. As the front line of prehospital care for individuals experiencing acute adverse consequences of drug use, emergency departments (EDs) provide valuable insights into the more serious aspects of certain patterns of drug use.

The Drug Abuse Warning Network (DAWN) is a public health surveillance system that monitors drug-related ED visits in the United States. To be a DAWN case, the ED visit must have involved a drug, either as the direct cause of the visit or as a contributing factor. Data are collected on numerous illicit drugs, including cocaine, marijuana, heroin,

and stimulants (i.e., amphetamines and methamphetamines). This issue of *The DAWN Report* focuses on geographic variations in ED visits involving illicit drug use in 2009, comparing 11 metropolitan statistical areas (MSAs) or metropolitan divisions with the national rates (Table 1).²

Overview

In 2009, there were an estimated 973,591 ED visits involving illicit drug use in the Nation as a whole, which occurred at a rate of 317 per 100,000 pop. (Figure 1). Four metropolitan areas had significantly higher rates than the Nation for

Table 1. Definitions and Abbreviations for the Drug Abuse Warning Network (DAWN) Metropolitan Statistical Areas (MSAs) and Divisions

Name of MSA or Division ^{a,b,c}	Areas Included within MSA or Division	Report Abbreviation
Boston-Cambridge-Quincy, MA-NH, MSA	Essex County, MA; Middlesex County, MA; Norfolk County, MA; Plymouth County, MA; Suffolk County, MA; Rockingham County, NH; and Strafford County, NH	Boston
Chicago-Naperville-Joliet, IL-IN-WI, MSA	Cook County, IL; DeKalb County, IL; DuPage County, IL; Grundy County, IL; Kane County, IL; Kendall County, IL; Lake County, IL; McHenry County, IL; Will County, IL; Jasper County, IN; Lake County, IN; Newton County, IN; Porter County, IN; and Kenosha County, WI	Chicago
Denver-Aurora, CO, MSA	Denver, CO; Aurora, CO; Adams County, CO; Arapahoe County, CO; Broomfield County, CO; Clear Creek County, CO; Denver County, CO; Douglas County, CO; Elbert County, CO; Gilpin County, CO; Jefferson County, CO; and Park County, CO	Denver
Detroit-Warren-Livonia, MI, MSA	Detroit, MI; Warren, MI; Livonia, MI; Dearborn, MI; Farmington Hills, MI; Troy, MI; Southfield, MI; Pontiac, MI; and Taylor, MI	Detroit
Miami-Dade County Division	Miami, FL; Miami Beach, FL; and Dade County, FL	Miami-Dade
Miami-Fort Lauderdale Division	Fort Lauderdale, FL; Pompano Beach, FL; Deerfield Beach, FL; West Palm Beach, FL; Boca Raton, FL; Boynton Beach, FL; Broward County, FL; and Palm Beach County, FL	Fort Lauderdale
Minneapolis-St. Paul-Bloomington, MN-WI, MSA	Minneapolis, MN; St. Paul, MN; Bloomington, MN; Plymouth, MN; Eagan, MN; Eden Prairie, MN; Minnetonka, MN; Anoka County, MN; Carver County, MN; Chisago County, MN; Dakota County, MN; Hennepin County, MN; Isanti County, MN; Ramsey County, MN; Scott County, MN; Sherburne County, MN; Washington County, MN; Wright County, MN; Pierce County, WI; and St. Croix County, WI	Minneapolis
New York-5 Boroughs Division	The New York-5 Boroughs Division includes Bronx County, NY [Bronx]; Kings County, NY [Brooklyn]; New York County, NY [Manhattan]; Queens County, NY [Queens]; and Richmond County, NY [Staten Island]	New York City
Phoenix-Mesa-Scottsdale, AZ, MSA	Maricopa County, AZ, and Pinal County, AZ	Phoenix
San Francisco Metropolitan Division	Marin County, CA; San Mateo County, CA; and San Francisco County, CA	San Francisco
Seattle-Tacoma-Bellevue, WA, MSA	Seattle, WA; Tacoma, WA; Bellevue, WA; Everett, WA; Kent, WA; and Renton, WA	Seattle

^aData for each MSA or division are representative of the 24-hour, general purpose EDs in that area.

^bUnless otherwise noted, DAWN defines metropolitan areas using the MSA and division definitions issued by the Office of Management and Budget (OMB) in June 2003 (http://www.whitehouse.gov/omb/bulletins_b03-04). DAWN uses these names and definitions even if the names or composition were changed by OMB. More detailed information about these areas may be accessed at: http://www.oas.samhsa.gov/2k11/DAWN2009Methods/DAWN2k9_MethodologyReport.htm

^cDAWN reports metropolitan area estimates for 13 metropolitan areas. In this report, two areas were excluded: the Houston-Baytown-Sugar Land, TX, MSA (or "Houston") and the San Diego-Carlsbad-San Marcos, CA, MSA (or "San Diego"). Both were excluded because the 2009 estimates were unreliable due to low representation in those areas for that year.

ED visits involving illicit drugs: Boston (571 per 100,000 pop.), New York City (555 per 100,000 pop.), Chicago (507 per 100,000 pop.), and Detroit (462 per 100,000 pop.).

ED Visits Involving Specific Illicit Drugs

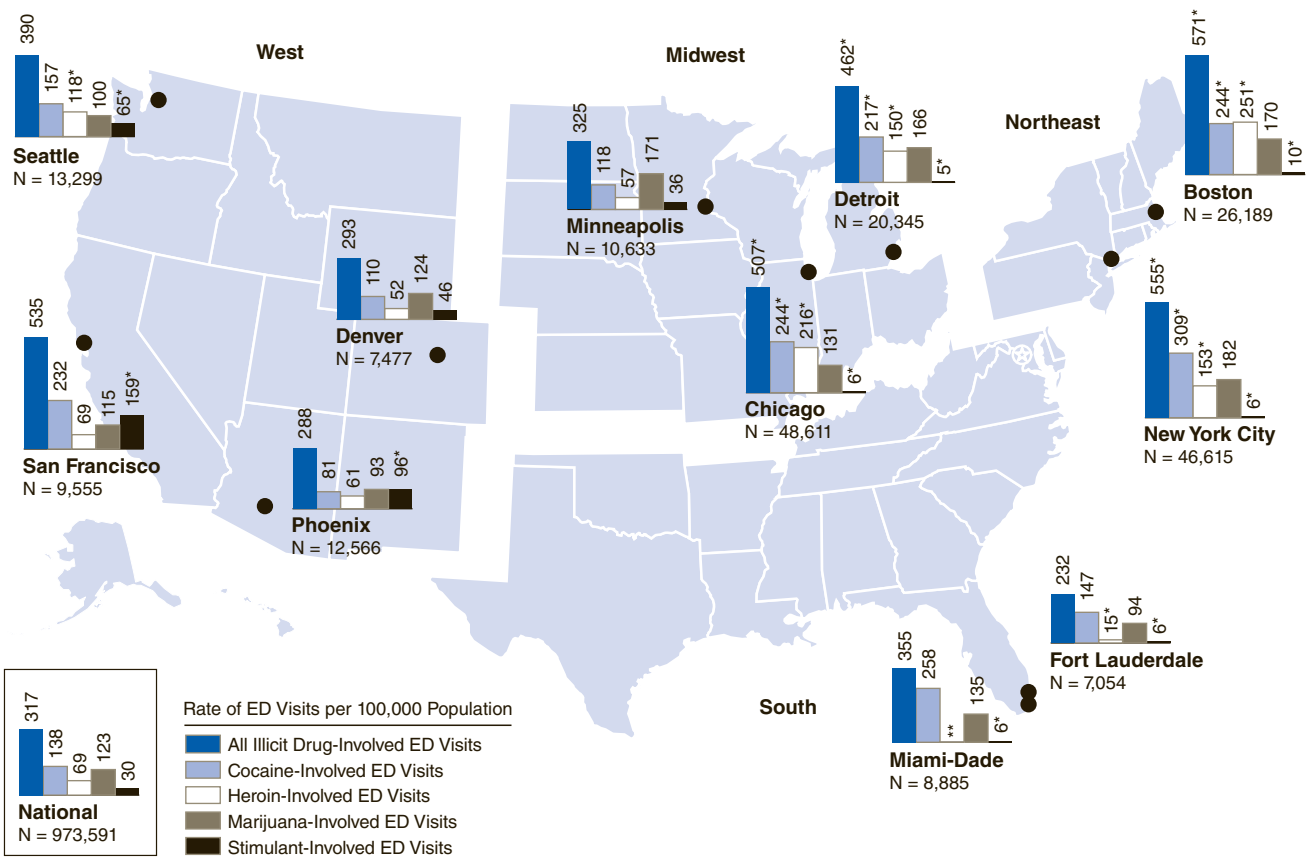
Differences by specific illicit drugs were examined by metropolitan area, including cocaine, marijuana, heroin, and stimulants (i.e., amphetamines and methamphetamines). The national rate for ED visits involving cocaine was 138 per 100,000 pop. in 2009 (Figure 1). Compared with the national rate, the rates of ED visits involving cocaine were significantly higher

in New York City (309 per 100,000 pop.), Boston (244 per 100,000 pop.), Chicago (244 per 100,000 pop.), and Detroit (217 per 100,000 pop.).

The national rate of ED visits involving heroin was 69 per 100,000 pop. (Figure 1). In comparison, the rates of ED visits involving heroin were significantly higher in Boston (251 per 100,000 pop.), Chicago (216 per 100,000 pop.), New York City (153 per 100,000 pop.), Detroit (150 per 100,000 pop.), and Seattle (118 per 100,000 pop.).

Nationally, ED visits involving stimulants occurred at a rate of 30 per 100,000 pop. (Figure 1). Rates of ED visits involving stimulants were significantly higher than those in the Nation

Figure 1. Rates of Emergency Department (ED) Visits Involving Illicit Drugs, by Metropolitan Statistical Area (MSA) or Metropolitan Division: 2009

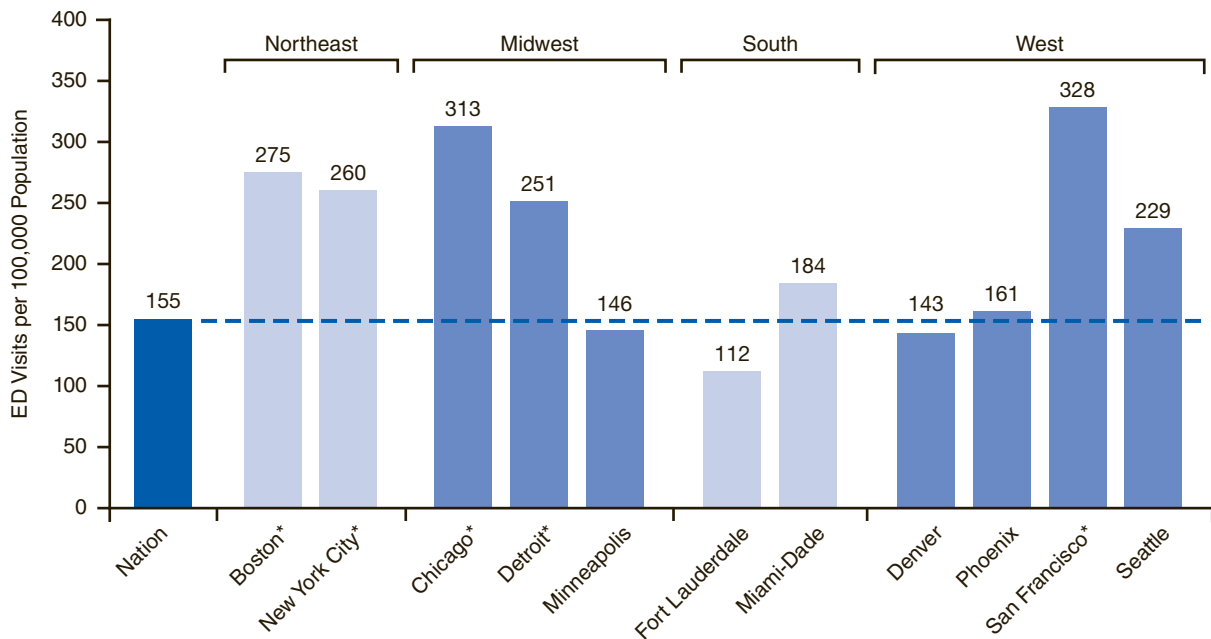


* The difference between the metropolitan area and the Nation was statistically significant at the .05 level.

** Estimates are suppressed due to low statistical precision.

Source: 2009 SAMHSA Drug Abuse Warning Network (DAWN).

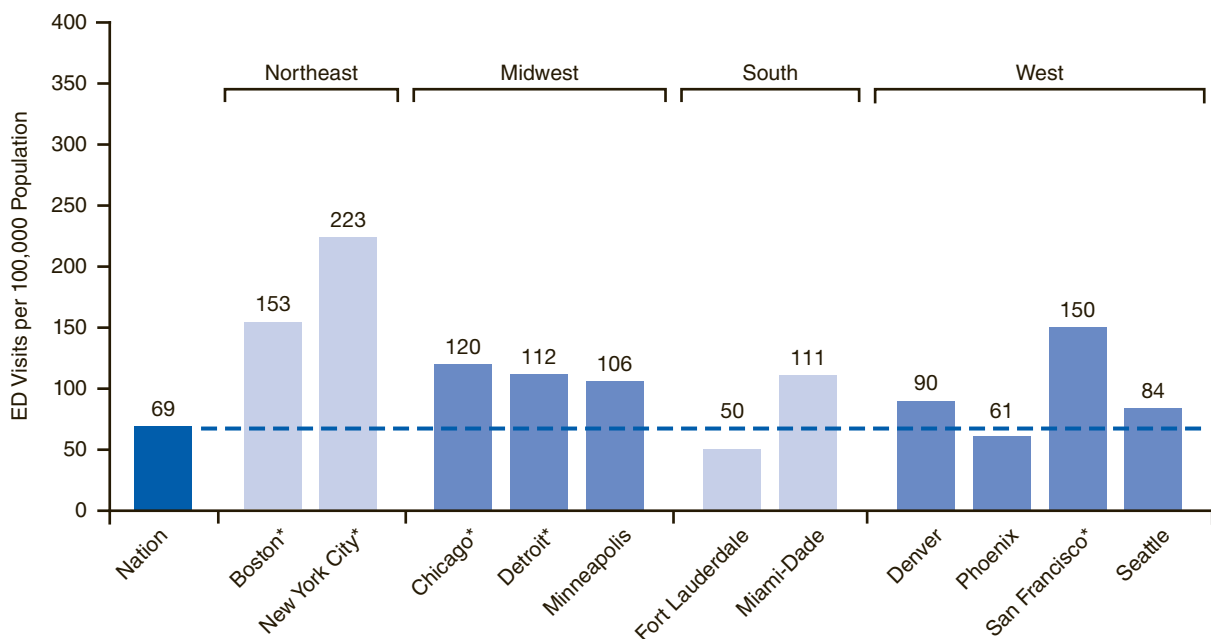
Figure 2. Rates of Emergency Department (ED) Visits Involving Illicit Drugs Only in Metropolitan Areas: 2009



* The difference between the metropolitan area and the Nation was statistically significant at the .05 level.

Source: 2009 SAMHSA Drug Abuse Warning Network (DAWN).

Figure 3. Rates of Emergency Department (ED) Visits Involving Illicit Drugs in Combination with Alcohol in Metropolitan Areas: 2009



* The difference between the metropolitan area and the Nation was statistically significant at the .05 level.

Source: 2009 SAMHSA Drug Abuse Warning Network (DAWN).

as a whole in San Francisco (159 per 100,000 pop.), Phoenix (96 per 100,000 pop.), and Seattle (65 per 100,000 pop.). Several metropolitan areas (all with rates of 10 per 100,000 pop. or less)—including Boston, Fort Lauderdale, Miami-Dade, Chicago, New York City, and Detroit—had lower rates than those in the Nation as a whole.

The rates of ED visits involving marijuana ranged from 93 per 100,000 pop. (Phoenix) to 182 per 100,000 pop. (New York City) (Figure 1). None of the metropolitan areas had rates that were statistically different from the national rate (123 per 100,000 pop.).

Illicit Drugs Combined with Other Substances

ED visits involving illicit drugs in combination with other substances—including alcohol and pharmaceuticals—were examined to determine if there were any geographic differences. Nationally, the rate of visits involving illicit drugs only was 155 per 100,000 pop. (Figure 2). Five metropolitan areas had significantly higher rates than the Nation: San Francisco (328 per 100,000 pop.), Chicago (313 per 100,000 pop.), Boston (275 per 100,000 pop.), New York City (260 per 100,000 pop.), and Detroit (251 per 100,000 pop.).

Nationally, ED visits involving illicit drugs in combination with alcohol occurred at a rate of 69 per 100,000 pop. (Figure 3). Five metropolitan areas had significantly higher rates: New York City (223 per 100,000 pop.), Boston (153 per 100,000 pop.), San Francisco (150 per 100,000 pop.), Chicago (120 per 100,000 pop.), and Detroit (112 per 100,000 pop.).

The national rate for ED visits involving illicit drugs combined with pharmaceuticals was 67 per 100,000 pop. There were no statistically significant differences found when the metropolitan area rates were compared against the national rate for ED visits involving these combinations. Rates of ED visits for these combinations ranged from 35 per 100,000 pop. (Miami-Dade) to 92 per 100,000 pop. (Boston).

Discussion

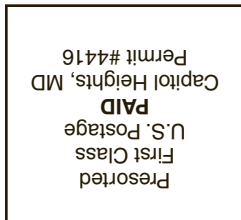
The 2011 National Prevention Strategy encourages local governments to reduce drug use and its associated negative outcomes and highlights the accomplishments of the Drug Free Communities Program.³ ED data can help identify how often specific illicit drugs are involved in medical emergencies; such local information on drug abuse and its negative consequences can be used to plan for prevention activities, emergency medical services, and treatment needs. As local governments and health care facilities develop policies and strive to use their resources as effectively as possible, ED data can be used to help officials make decisions about current and emerging drug abuse-related issues.

End Notes

- Office of Applied Studies. (2010). *Substate estimates from the 2006-2008 National Surveys on Drug Use and Health*. Rockville, MD: Substance Abuse and Mental Health Services Administration. [Available at <http://oas.samhsa.gov/substate2k10/toc.cfm>]
- When differences in rates of ED visits between metropolitan areas and the Nation are described as “higher” or “lower” in this report, the difference is statistically significant at the .05 level. Unless otherwise noted, DAWN defines metropolitan areas using the MSA and division definitions issued by the Office of Management and Budget (OMB) in June 2003 (http://www.whitehouse.gov/omb/bulletins_b03-04). DAWN uses these names and definitions even if the names or composition were changed by OMB. More detailed information about these areas can be found here: http://oas.samhsa.gov/2k11/DAWN2009Methods/DAWN2k9_MethodologyReport.htm
- National Prevention Council. (2011). *National prevention strategy*. Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General.

Suggested Citation

Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (December 15, 2011). *The DAWN Report: Illicit Drug-Related Emergency Department Visits in Metropolitan Areas of the United States: 2009*. Rockville, MD.



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Substance Abuse and Mental Health Services Administration
Center for Behavioral Health Statistics and Quality
1 Choke Cherry Road, Room 7-1044
Rockville, MD 20857
Official Business
Penalty for Private Use \$300



Findings from SAMHSA's 2009 Drug Abuse Warning Network (DAWN)

Illicit Drug-Related Emergency Department Visits in Metropolitan Areas of the United States: 2009

- Rates of emergency department (ED) visits involving illicit drugs were higher in Boston (571 per 100,000 pop.), New York City (555 per 100,000 pop.), Chicago (507 per 100,000 pop.), and Detroit (462 per 100,000 pop.) than in the Nation as a whole (317 per 100,000 pop.)
- In comparison with the national rate (69 per 100,000 pop.), the rates of ED visits involving heroin were higher in Boston (251 per 100,000 pop.), Chicago (216 per 100,000 pop.), New York City (153 per 100,000 pop.), Detroit (150 per 100,000 pop.), and Seattle (118 per 100,000 pop.)
- Compared with the national rate (69 per 100,000 pop.), five metropolitan areas showed higher rates of visits involving illicit drugs in combination with alcohol: New York City (223 per 100,000 pop.), Boston (153 per 100,000 pop.), San Francisco (150 per 100,000 pop.), Chicago (120 per 100,000 pop.), and Detroit (112 per 100,000 pop.)

The Drug Abuse Warning Network (DAWN) is a public health surveillance system that monitors drug-related morbidity and mortality. DAWN uses a probability sample of hospitals to produce estimates of drug-related emergency department (ED) visits for the United States and selected metropolitan areas annually. DAWN also produces annual profiles of drug-related deaths reviewed by medical examiners or coroners in selected metropolitan areas and States.

Any ED visit related to recent drug use is included in DAWN. All types of drugs—licit and illicit—are covered. Alcohol involvement is documented for patients of all ages if it occurs with another drug. Alcohol is considered an illicit drug for minors and is documented even if no other drug is involved. The classification of drugs used in DAWN is derived from the Multum *Lexicon*, copyright 2010 Lexi-Comp, Inc., and/or Cerner Multum, Inc. The Multum Licensing Agreement governing use of the *Lexicon* can be found at http://dawninfo.samhsa.gov/drug_vocab.

DAWN is one of three major surveys conducted by the Substance Abuse and Mental Health Services Administration's Center for Behavioral Health Statistics and Quality (SAMHSA/CBHSQ). For more information on other CBHSQ surveys, go to <http://oas.samhsa.gov>. SAMHSA has contracts with Westat (Rockville, MD) and RTI International (Research Triangle Park, NC) to operate the DAWN system and produce publications.

For publications and additional information about DAWN, go to <http://DAWNinfo.samhsa.gov/>.



U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
Substance Abuse & Mental Health Services Administration
Center for Behavioral Health Statistics and Quality
www.samhsa.gov